

Mumbai University

Question Paper

May - 2018

B.Sc.IT – SEMESTER: V (IDOL – OLD COURSE)

- INTERNET SECURITY
- SQL – 2
- VISUAL BASIC – 6
- ADVANCED JAVA (ELECTIVE – I)
- EMBEDDED SYSTEMS AND PROGRAMMING (ELECTIVE – I)
- MULTIMEDIA (ELECTIVE – I)
- WEB DESIGN AND INTERNET BASED APPLICATIONS (ELECTIVE – I)
- BPR (ELECTIVE – II)
- ERP SYSTEMS (ELECTIVE – II)
- GIS (ELECTIVE – II)
- MANAGEMENT INFORMATION SYSTEMS (ELECTIVE – II)

KAMAL THAKUR

Mumbai University

May - 2018

B.Sc.IT: SEMESTER – V

(QUESTION PAPER)

[IDOL – Old Course]

INTERNET SECURITY

Time: 3 Hours**Total Marks:** 100**N.B.:** (1) Question No. 1 is Compulsory.

(2) Attempt any four from Question Nos. 2 to 7.

(3) Make Suitable Assumptions Wherever Necessary And State The Assumptions Made.

(4) Answer To The Same Question Must Be Written Together.

(5) Number To The Right Indicates Marks.

(6) Draw Neat Labeled Diagrams Wherever Necessary.

Q.1 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) Why do we need Security? Discuss. (5)
- (B) Write note on Incident Handling. (5)
- (C) What is Security Policy? Who is involved in formation of Security Policy? (5)
- (D) Explain the Caesar Cipher Scheme with an example. How to break Caesar Cipher? (5)

Q.2 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) You are assigned the job of system administrator of a company. Explain how you will try to secure your network from the following that pose a threat to the security. (8)
- (i) Viruses
- (ii) Hackers
- (iii) Employees
- (iv) Cookies
- (B) What are the different types of Viruses? Explain the structure of Viruses. (6)
- (C) What Firewalls can do? What Firewalls cannot do? Where should we implement the Firewall? (6)

Q.3 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) State and explain different Security Models. (8)
- (B) Write a note on Digging of Worms. (6)
- (C) Discuss in detail the classification of Attacks. (6)

Q.4 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) Discuss in detail Risk Analysis. (8)
- (B) What do we mean by Proxy Servers? Explain their working in detail. How are they different from Circuit Gateways? (6)
- (C) Write a note on Botnets. (6)

Q.5 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) What is the difference between the substitution cipher and transposition cipher? What will be the output of the following plain text if we use Caesar Cipher to encode it? (8)
- "Social Engineering"
- (B) What are bugs and backdoors? What prevention mechanism can be used for them? (6)
- (C) Explain in general working of Digital Signatures. (6)

Q.6 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) Write the Diffie-Hellman Key Exchange algorithm and explain it in brief. Alex and Bob want to establish a secret key using this algorithm. (8)
- Given:** $n=11$, $x=2$, $y=3$. Find the values of secret key (K_1 and K_2)
- (B) What are the different ways of sniffing the password? How password sniffing can be avoided? (6)
- (C) Explain the concept of filtering by service with respect to TELNET. (6)

TURN OVER

Q.7 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) Define Message Digest. Write any one Message Digest Algorithm. (8)
- (B) What is meant by Public Key and Private Key in Cryptography? What is Encryption and Decryption of Message? What is there importance in transmitting information over the Network? (6)
- (C) Explain what you mean by Plain Text, Cipher Text, Encryption and Decryption. (6)
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B.Sc.IT: SEMESTER – V

(QUESTION PAPER)

[IDOL – Old Course]

SQL – 2

Time: 3 Hours

Total Marks: 100

N.B.: (1) Question No. 1 is Compulsory.

(2) Attempt any four from Question Nos. 2 to 7.

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Q.1 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) Differentiate between DML and DDL Statements. (5)
- (B) What are Views? State the difference between Views and Tables. (5)
- (C) Explain correlated Sub Queries with example. (5)
- (D) Explain the Access Control Statements in SQL. (5)

Q.2 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) Write SQL statement to create WORKERS, SECTIONS, and AREAS tables with all the constraints as given after Q. No. 7 (8)
- (B) Write a short note on data types of SQL2. (6)
- (C) Explain IN, ANY and ALL in SQL2. (6)

Q.3 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) Write the SQL queries for the following (refer to the tables given after Q. No. 7) (8)
- (i) List all the first name and last name of workers with their managers.
- (ii) List the entire worker id and worker name who belong to section id 25.
- (iii) List first name, section name and area name of all employees.
- (iv) List worker id, first name concatenated with salary and commission from the workers table. For e.g. worker_id: first_name's salary Rs. XXXXX has commission Rs. XXX
- (B) State and explain Aggregate Functions. (6)
- (C) Explain Primary Key and Foreign Key with an example. (6)

Q.4 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) Write the SQL queries for the following (refer to the tables given after Q. No. 7) (8)
- (i) List the workers whose salary is below 25000 and commission is between 2000 and 5000.
- (ii) List the names of the employees whose first_name starts with 'A' or 'B'.
- (iii) List the first_name of workers in the ascending order of the section and within that in the descending order of the salary.
- (iv) List the section name, section id and area name whose area id is 7 or city is 'DELHI'.
- (B) Write a short note on joins. (6)
- (C) Explain the following in-built SQL2 functions with examples: (6)
- (i) SUBSTR
- (ii) CAST
- (iii) TRIM

Q.5 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) Write the SQL queries for the following (refer to the tables given after Q. No. 7) (8)
- (i) List the worker id, salary, section name and area name of workers who have completed more than 3 years.
- (ii) List the first name, last name and hire date of workers who work in the section which is in city 'BANGALORE'.

TURN OVER

- (B) What is locking and why is it required? (6)
- (C) What are the different problems that occur due to Concurrency? (6)

Q.6 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) Write the SQL queries for the following (refer to the tables given after Q. No. 7) (8)
- (i) Write a query to display each sections name, area, number of workers and the average salary for all the workers in that section. Label the columns Name, Location, Number of People and Salary, respectively. Round the average salary to two decimal places.
- (ii) Display the manager number and the salary of the lowest paid worker for that manager. Exclude anyone whose manager is not known. Exclude any groups where the minimum salary is 40000 or less. Sort the output in the descending order of the salary.
- (B) Explain Single Database and Multi Database Architecture. (6)
- (C) Explain UNION and ORDER BY with examples. Differentiate between the two. (6)

Q.7 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) Write the SQL queries for the following (refer to the tables given after Q. No. 7) (8)
- (i) Write a query that produces the following for each worker:
`<worker last name> earns <salary> monthly but wants <3 times salary>.` Label the column Dream Salaries.
- (ii) Create a view called WORKERS_VU based on the workers id, workers last name and section id from the workers table. Change the heading for the workers name to EMP NAME.
- (B) What are Triggers? Explain its syntax with an example. (6)
- (C) Explain the concept of null values. How can null values be inserted in a table? (6)

Table: WORKERS

ATTRIBUTE	DATA TYPE	CONSTRAINT
WORKER_ID	NUMBER	PRIMARY KEY
FIRST_NAME	VARCHAR	
LAST_NAME	VARCHAR	
EMAIL	VARCHAR	
HIREDATE	DATE	
SALARY	NUMBER	
MGR_ID	NUMBER	
COMM_PCT	NUMBER	FOREIGN KEY REFERRING WORKERS (WORKER_ID)
SECTION_ID	NUMBER	FOREIGN KEY REFERRING SECTION (SECTION_ID)

Table: SECTION

ATTRIBUTE	DATA TYPE	CONSTRAINT
SECTION_ID	NUMBER	PRIMARY KEY
SECTION_NAME	VARCHAR	
MGR_ID	NUMBER	FOREIGN KEY REFERRING WORKERS (WORKER_ID)
AREA_ID	NUMBER	FOREIGN KEY REFERRING AREA (AREA_ID)

Table: AREAS

ATTRIBUTE	DATA TYPE	CONSTRAINT
AREA_ID	NUMBER	PRIMARY KEY
AREA_NAME	VARCHAR	
CITY	VARCHAR	

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B.Sc.IT: SEMESTER – V

(QUESTION PAPER)

[IDOL – Old Course]

VISUAL

BASIC – 6

Time: 3 Hours

Total Marks: 100

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Q.1 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) "The visibility of a variable is referred to as its scope". Comment (5)
- (B) Explain free file function with an example. (5)
- (C) Write a short note on control array. (5)
- (D) Explain the user defined data types with suitable examples. (5)

Q.2 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) Create a project to accept a character from the user. Provide a button "CHECK VOWEL", which will check if the character is a vowel and display in a message box "Character entered is a vowel" else "Character entered is a consonant". (8)
- (B) Explain the different Modes of File Operation. (6)
- (C) Explain in detail Message Box Function. (6)

Q.3 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) Create a project to declare a class that will store CODE, NAME, AGE and SALARY of an employee. Provide a calculate button for BONUS calculation which is 10% of the salary. Display all the details along with bonus in a message box. (8)
- (B) Describe the purpose of each of the following methods or properties for a list box control with example: (6)
- (i) AddItem
 - (ii) RemoveItem
 - (iii) ListCount
- (C) Explain the following controls in detail: (6)
- (i) Text Box
 - (ii) Images

Q.4 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) Create a project to maintain the state names and their two letter abbreviation in a sequential file. Allow the user to add state names and its abbreviation. Provide a search button to find the abbreviation based on the state name entered by the user in a text box. If no match is found, print an appropriate error message. (Sample Data; Maharashtra=MH, Gujarat=GJ, Goa=GA, etc.) (8)
- (B) Explain defining Keyboard Access Keys and setting tab order for controls. (6)
- (C) What are the various ways of using FOR-NEXT loop? (6)

Q.5 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) What will be printed for each of this code segment: (8)
- (i) `Printer.Print "Half a loaf";`
`Printer.Print "is better than one"`
 - (ii) `Printer.Print "Half, ", "My Eye"`
 - (iii) `Printer.Print "Hawks";0, "Doves";0`
 - (iv) `Printer.Print 1,2,3,4,5,6`

TURN OVER

- (B) Explain font and color dialog box in detail. (6)
(C) How can we create new objects in Visual Basic? (6)

Q.6 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) Create a project to display the information of publisher table from books.mdb include command buttons for record navigation. Hide the data control. Allow user to add and delete records using buttons. (Publisher {publisher_id, name, company_name, city, state, zip, telephone_no}) (8)
(B) What are the ways for creating new sub procedure? How are variables passed to the procedure? (6)
(C) Explain the different windows of integrated development environment. (6)

Q.7 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) Explain LEFT, RIGHT, MID and LEN string functions. (8)
(B) How can we create a new DYNASET? Give example. (6)
(C) How are the Visual Basic projects debugged? (6)
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B.Sc.IT: SEMESTER – V

(QUESTION PAPER)

[IDOL – Old Course]

ELECTIVE – I

ADVANCED

JAVA

Time: 3 Hours**Total Marks:** 100**N.B.:** (1) Question No. 1 is Compulsory.

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(6) Draw Neat Labeled Diagrams Wherever Necessary.

Q.1 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) Write a short note on JLabel and JButton with an example program. (5)
- (B) Explain the steps to be followed in Java Database Connectivity for accessing a database table content. (5)
- (C) What are servlets? Explain the request/response paradigm of servlets. (5)
- (D) Write a JSP program to accept a number from the HTML form, and find its Square Root and Cube Root. (5)

Q.2 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) List and explain the layout orientation used for JList? Give suitable example. (8)
- (B) Write a short note on JTree with an example. (6)
- (C) Create a GUI program that add tabs in a window. Add three tabs tab1, tab2 and tab3 that load Panel1, Panel2 and Panel3 respectively. Panel1 consist of 2 labels, Panel2 consist of 2 textboxes and Panel3 consist of two radio buttons. (6)

Q.3 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) Explain the following: (8)
- (i) Root Pane
 - (ii) Glass Pane
 - (iii) Layered Pane
 - (iv) Content Pane
- (B) Write a short note on JPanel. (6)
- (C) Explain the procedure of Creating Message, Input and Confirmation Dialogs in Swing. (6)

Q.4 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) Write a short note on JDBC Architecture. (8)
- (B) Explain Connection interface along with its methods. (6)
- (C) What is mean by ResultSetMetaData interface? List down the methods of ResultSetMetaData interface. (6)

Q.5 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) Write a JDBC program that inserts dynamic values into a student table by accepting the values from the user. The structure of student table is (rollno, name and marks). (8)
- (B) Define the Servlet interface. Describe the methods of Servlet Interface. (6)
- (C) Explain the life cycle of a servlet. (6)

Q.6 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) Write a Servlet program to find the number is prime or not. (8)
- (B) Describe the various methods of HttpServletRequest and HttpServletResponse Interface. (6)
- (C) What is JAR files? List and explain various options used while creating a JAR file. (6)

TURN OVER

Q.7 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) Explain the following: (8)
- (a) *JSP scriptlets*
 - (b) *JSP expressions*
 - (c) *JSP Comments*
 - (d) *JSP declarations*
- (B) Enlist the Implicit Objects of JSP. Explain any 4 of them in detail. (6)
- (C) Explain with an example how Session Management is done in JSP. (6)
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B.Sc.IT: SEMESTER – V

(QUESTION PAPER)

[IDOL – Old Course]

ELECTIVE – I

EMBEDDED SYSTEMS

AND

PROGRAMMING

Time: 3 Hours**Total Marks:** 100**N.B.:** (1) Question No. 1 is Compulsory.

(2) Attempt any four from Question Nos. 2 to 7.

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(6) Draw Neat Labeled Diagrams Wherever Necessary.

Q.1 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) Explain the blinking LED program in detail. (5)
- (B) Define build process and explain steps involved in it. (5)
- (C) Why is C The Least Common Denominator in embedded systems? (5)
- (D) Explain why "hello world" program is a difficult program to begin with in learning to program embedded systems. (5)

Q.2 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) Explain the concept of Remote Debugger. (8)
- (B) Explain in short Memory Map of Processor. (6)
- (C) Explain Common Memory problems in Embedded Systems Memory. (6)

Q.3 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) Why do we need Memory Testing, what are different types of Testing, is it necessary to perform this in sequence, If yes then what is sequence and why? (8)
- (B) Explain the following Address Bus Test. (6)
- (C) Explain the problem of Flash Memory and concept of Flash Driver. (6)

Q.4 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) Explain Scheduling Point, Idle Task and Ready List with respect to embedded operating system. (8)
- (B) Explain the concept of Watchdog Driver. (6)
- (C) Explain the concept of Context Switch. (6)

Q.5 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) Give brief explanation of different types of Memory Devices. (8)
- (B) Explain the concept of Scheduler. (6)
- (C) Explain how code is downloaded in the ROM of Embedded Systems. (6)

Q.6 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) Write Short note – Real Time Character of an Operating System & Embedded IDE. (8)
- (B) Explain Direct Memory Access. (6)
- (C) Explain in short Interrupt Map of Processor. (6)

Q.7 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) Explain Control and Status Registers. (8)
- (B) Explain Simulators, Logic analyzer and Oscilloscope. (6)
- (C) Explain variations in Embedded Systems. (6)

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B.Sc.IT: SEMESTER – V

(QUESTION PAPER)

[IDOL – Old Course]

ELECTIVE – I

MULTIMEDIA

Time: 3 Hours**Total Marks:** 100**N.B.:** (1) Question No. 1 is Compulsory.

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(6) Draw Neat Labeled Diagrams Wherever Necessary.

Q.1 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) Write a short note on MPEG Compression. (5)
- (B) Write a short note on MIDI. (5)
- (C) Write a short note on Storyboarding. (5)
- (D) Explain the term: Anti-aliasing, 3D animation (5)

Q.2 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) What is a Multimedia Systems? State the different types of components in Multimedia Systems. (8)
- (B) Explain the difference between Lossy and Lossless Compression. (6)
- (C) Explain any two types of File Formats in Multimedia. (6)

Q.3 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) What is a Run-Length Encoding? Explain with a suitable example. (8)
- (B) What are the Multimedia Authoring Tools? Explain them. (6)
- (C) Write a short notes on Sampling and Quantization. (6)

Q.4 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) Discuss the detail of Content Analysis for different Applications. (8)
- (B) Describe RGB Color Model. Why it is called as Additive Color Model. (6)
- (C) Describe CMYK Color Model. Why it is called as Subtractive Color Model. (6)

Q.5 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) Explain the Huffman Coding Algorithm with suitable example. (8)
- (B) Explain any two tools for creation of Multimedia Presentation. (6)
- (C) Write a short note on Interpolation. (6)

Q.6 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) Explain the issues concerning problems of transfer of Data on Networks. (8)
- (B) Write a short of Computer Based Training (CBT). (6)
- (C) List and explain different types of Audio File Formats. (6)

Q.7 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) Explain the process of JPEG Compression. (8)
- (B) Briefly discuss the Graphic File Format used in Web Application. (6)
- (C) What are different types of tools used in Animation? Explain each of them. (6)

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B.Sc.IT: SEMESTER – V

(QUESTION PAPER)

[IDOL – Old Course]

ELECTIVE – I

WEB DESIGN

AND

INTERNET BASED APPLICATIONS

Time: 3 Hours**Total Marks:** 100**N.B.:** (1) Question No. 1 is Compulsory.

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Q.1 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) Explain <IFRAME> Tag with its attributes. (5)
- (B) Explain <LINK> Tag with its Attributes. Give examples. (5)
- (C) Create an Asp Page that will take an input a number and display reverse of that number. (5)
- (D) Write a VBSCRIPT function to print all prime numbers from 1 to100. (5)

Q.2 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) Write a note on Session and Connection Pooling. (8)
- (B) Explain the Conditional Statements of VB Scripts with example. (6)
- (C) Explain Tag with example. (6)

Q.3 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) Explain the following HTML tags: <FRAME> and <FRAMESET> with example. (8)
- (B) Write HTML code to design the following: (6)
1. Indoor Games
 - a. Computer oriented
 - i. Bug debug
 - ii. NFS
 - b. Non Computer oriented
 - i. Carom
 - ii. Chess
 2. Outdoor Games
 - a. Cricket
 - b. Football
- (C) Explain Server object with its methods. Give example. (6)

Q.4 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) What are Cookies? How Cookies are created? Set Lifetime of Cookie. (8)
- (B) Explain Logical Operators of VB Script with examples. (6)
- (C) Explain <DL>, <DT> & <DD> with examples. (6)

Q.5 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) State and explain the following advanced features of Connection Object: (8)
- (i) Transaction Property
 - (ii) Open Schema Method
- (B) With example discuss following form collection tags: (6)
- (i) <TEXTAREA>
 - (ii) <FORM>
- (C) What are the different approaches to Style Sheets? Give example of each. (6)

TURN OVER

Q.6 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) List and explain with syntax various FORM controls placed by <INPUT> tag. (8)
- (B) Explain three ways to connect to a MS Access database using ASP. (6)
- (C) Write a VBScript code to accept a word. Check whether it is in lowercase or uppercase. If in lower case, convert in uppercase and if in uppercase, convert in lower case and display it. (6)

Q.7 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) Write HTML Code for the following HTML Page: (8)

Trends of Revenue for a firm

Price (Rs.) (P)	Quantity Sold(QR)	Total Revenue (TR)	Average Revenue (AR)
2	<input type="text"/>	<input type="text"/>	<input type="text"/>
4	<input type="text"/>	<input type="text"/>	<input type="text"/>
5	<input type="text"/>	<input type="text"/>	<input type="text"/>
7	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="button" value="Calculate"/>			

Quantity-sold should be a drop down box with values: 2, 4, 6, 8, 10, and 12. Only one value can be selected at one time. Price cannot be modified.

- (B) Write VBScript function to validate above form as follows: (6)
- TR and AR should be greater than zero and numeric. On click of Calculate button, display TR and AR using the formulas $TR = P \times QS$, $AR = P$.
- (C) Write ASP code to create a table PRODUCT (id, name, price, qty) in database ACM.MDB. Also insert two records in this table. (6)

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B.Sc.IT: SEMESTER – V

(QUESTION PAPER)

[IDOL – Old Course]

ELECTIVE – II

BPR

Time: 3 Hours**Total Marks:** 100**N.B.:** (1) Question No. 1 is Compulsory.

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Q.1 WRITE SHORT NOTES ON: (20 MARKS)

- (A) Business Process Reengineering (5)
- (B) Enterprise Resource Planning (5)
- (C) Executive Information Systems (5)
- (D) Decision Support Systems (5)

Q.2 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) Explain the purpose of the Project Quality Plan? Explain the quality elements that must be included in the Project Quality Plan. (8)
- (B) What is the sequence of problem solving sequence for TQM process improvement? Explain. (6)
- (C) Write a short note on Change Management. (6)

Q.3 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) Explain the Process Reengineering Life Cycle in detail. (8)
- (B) Explain the different activities involved in Project Management. (6)
- (C) Enumerate the seven principles of Reengineering. (6)

Q.4 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) How is BPR implemented? What are the attributes we may look for while selecting a BPR Software? (8)
- (B) Explain in detail the process of Project Budgeting. (6)
- (C) What are the principles of TQM? Explain. (6)

Q.5 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) Explain in detail the Project Development Life Cycle. (8)
- (B) What are the difficulties and risks in BPR? Explain. (6)
- (C) What are the aspects that must be managed as a part of Project Scope? Explain. (6)

Q.6 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) Enumerate the nine key elements to evaluate the project readiness assessment. Prepare a brief questionnaire for each element. (8)
- (B) How should the project team be selected? Who should the team be composed of? What should be the size of the team? What the key roles that must be assigned to the team members? Explain. (6)
- (C) Explain the role of Project Manager. (6)

Q.7 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) Enumerate and explain the steps to Total Quality Management. (8)
- (B) Design and explain a Template for Project Planning. (6)
- (C) Explain the Breakthrough Reengineering Model. (6)

Mumbai University

May - 2018

B.Sc.IT: SEMESTER – V

(QUESTION PAPER)

[IDOL – Old Course]

ELECTIVE – II

ERP

SYSTEMS

Time: 3 Hours**Total Marks:** 100**N.B.:** (1) Question No. 1 is Compulsory.

(2) Attempt any four from Question Nos. 2 to 7.

(3) Make Suitable Assumptions Wherever Necessary And State The Assumptions Made.

(4) Answer To The Same Question Must Be Written Together.

(5) Number To The Right Indicates Marks.

(6) Draw Neat Labeled Diagrams Wherever Necessary.

Q.1 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) Who are ERP Consultants? Explain their roles. (5)
- (B) Explain the concept of EIS. (5)
- (C) Give the advantages of ERP. (5)
- (D) Explain the concept of BPR. (5)

Q.2 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) Explain the importance of End User Training in ERP implementation Life Cycle. (8)
- (B) What is Data Mining? State the need of computerized and Automated Mining Tools. (6)
- (C) What do you mean by Integrated Management Information? (6)

Q.3 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) What is OLAP? How it differs from OLTP. (8)
- (B) What is Cycle Time Reduction? How is it implemented? (6)
- (C) Explain the importance of Plant Maintenance Module. (6)

Q.4 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) Which companies are called "Big 5" in the ERP market and why? (8)
- (B) Will ERP systems eliminate clerical jobs? If yes, what should those employees do? (6)
- (C) Explain the concept of GAP analysis. (6)

Q.5 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) What is MIS? What are the main differences between MIS and data processing system? (8)
- (B) What is Data Warehouse? Why do you need a Data Warehouse? (6)
- (C) Describe the functions of Material Management. (6)

Q.6 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) Explain the Personnel Management System of HR. (8)
- (B) What is the Impact of Internet and www on ERP Products? (6)
- (C) Explain the features of SAP/R3 Module. (6)

Q.7 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) What are the drawbacks of In-House Development of ERP? (8)
- (B) State and explain the Sub System of Financial Module. (6)
- (C) How is ERP Package Evaluated? (6)

Mumbai University

May - 2018

B.Sc.IT: SEMESTER – V

(QUESTION PAPER)

[IDOL – Old Course]

ELECTIVE – II

GIS

Time: 3 Hours**Total Marks:** 100**N.B.:** (1) Question No. 1 is Compulsory.

(2) Attempt any four from Question Nos. 2 to 7.

(3) Make Suitable Assumptions Wherever Necessary And State The Assumptions Made.

(4) Answer To The Same Question Must Be Written Together.

(5) Number To The Right Indicates Marks.

(6) Draw Neat Labeled Diagrams Wherever Necessary.

Q.1 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) What is a Map and what are its types? (5)
- (B) Explain the Relevance of Geographic Information Systems in Information Technology. (5)
- (C) Explain the Social and Institutional Context of Geographic Information System. (5)
- (D) Explain Raster Model of Data Representation in a Geographic Information System. (5)

Q.2 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) Explain the components of Geographic Information System. (8)
- (B) Explain the different types of data in Geographic Information System. (6)
- (C) Explain the concept of neighborhood operations in detail with example. (6)

Q.3 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) Explain the various Modes of Scanning. (8)
- (B) What is Digitization Scheme? (6)
- (C) Explain the Importance of Geographic Information System in Transportation System. (6)

Q.4 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) Explain Vector Data Model of Data Representation. (8)
- (B) Explain Physical Distance Measures using an example. (6)
- (C) Write short notes on Thiessen Polygon & Density Estimation. (6)

Q.5 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) Define Geographic Grid and explain its characteristics. (8)
- (B) What are the applications of Geographic Information System? (6)
- (C) What is Map Resolution and its types? (6)

Q.6 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) Explain Spatial Autocorrelation. (8)
- (B) Define Zonal Operations & explain its applications. (6)
- (C) Differentiate between Spatial and Aspatial Data. (6)

Q.7 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) Define Co-Ordinate System. Explain its significance. What are Co-Ordinate Transformations? (8)
- (B) Explain Terrain Map and Analysis in detail. (6)
- (C) What is Map Projection? List and explain its types. (6)

Mumbai University

May - 2018

B.Sc.IT: SEMESTER – V

(QUESTION PAPER)

[IDOL – Old Course]

ELECTIVE – II

**MANAGEMENT
INFORMATION
SYSTEMS**

Time: 3 Hours**Total Marks:** 100**N.B.:** (1) Question No. 1 is Compulsory.

(2) Attempt any four from Question Nos. 2 to 7.

(3) Make Suitable Assumptions Wherever Necessary And State The Assumptions Made.

(4) Answer To The Same Question Must Be Written Together.

(5) Number To The Right Indicates Marks.

(6) Draw Neat Labeled Diagrams Wherever Necessary.

Q.1 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) What are the Parameters of the Quality Product? Explain. (5)
- (B) What is MIS? Explain the uses of computer in MIS. (5)
- (C) What is Rational Decision? What are its types? Explain. (5)
- (D) What are the attributes of Information? Explain. (5)

Q.2 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) List & explain Organization Behavioral Factors. (8)
- (B) Describe Matrix Model of an Organization Structure. Compare it with Functional Organization. (6)
- (C) Write a short note on Spiral Model. (6)

Q.3 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) Explain the principles of Operational Management. (8)
- (B) What is System Control? Explain the concept of Control Mechanism. (6)
- (C) Write a short note on Data Processing System. (6)

Q.4 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) What are the steps of Transaction Processing in Information System Application? (8)
- (B) What are the contents of IT implementation Plan? Explain. (6)
- (C) Explain the scope of Economic Environment. (6)

Q.5 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) What are the characteristics of Programming Languages? Explain. (8)
- (B) What are the functions of Manager? Explain. (6)
- (C) Explain Product Strategy. (6)

Q.6 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) What are the Sources of Collecting Data? Explain. (8)
- (B) "The choice of IT is a Strategic Decision but not a Financial Decision". Explain (6)
- (C) What is System Engineering? Explain. (6)

Q.7 ATTEMPT THE FOLLOWING QUESTIONS: (20 MARKS)

- (A) Explain the Managerial Function Planning & Control. (8)
- (B) How will you avoid misusing the Information? (6)
- (C) Short note on Project Model. (6)